

REMARKS

The Official Action mailed September 21, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statement filed on February 11, 2004. A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 2-37 are pending in the present application, of which claims 2-9 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action objects to the abstract for use of the term "comprises." In accordance with the Examiner's suggestion, in the abstract, "comprises" has been changed to "includes." Reconsideration of the objection is requested.

The Official Action objects to the title as not descriptive. In response, the title has been amended. The amended title is believed to be descriptive of the present invention. Reconsideration of the objection is requested.

The Official Action rejects claims 2-9 and 30-37 as obvious based on U.S. Patent No. 5,977,940 to Akiyama et al. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 2-9 recite a data line driver circuit over a substrate; and a dividing circuit over the substrate, where the dividing circuit divides a signal into n signals, and where the n signals are inputted into corresponding n pixels by a timing signal supplied from the data driver circuit, simultaneously. For the reasons provided below, Akiyama does not teach or suggest the above-referenced features of the present invention.

The Official Action asserts that "Akiyama et al. teach a semiconductor device comprising: a plurality of pixels over a substrate; a data line driver circuit over the substrate; and a dividing circuit over the substrate (Figures 1A, columns 9, 10, 12, 15 and 19; lines 28-37, 14-22 & 29-35, 23-36, 1-6 and 41-51, respectively)" (page 3, Paper No. 20050711). The Applicants respectfully disagree and traverse the above-referenced assertions in the Official Action.

The Official Action does not set forth which portions of Figure 1A, columns 9, 10, 12, 15 and 19; lines 28-37, 14-22 & 29-35, 23-36, 1-6 and 41-51, respectively, of Akiyama correspond with a plurality of pixels over a substrate; a data line driver circuit over a substrate; and a dividing circuit over the substrate. However, upon review of the reference, it appears that Akiyama teaches a liquid crystal display device of active matrix type with pixel electrodes in a matrix shape, where a drive device drives a pixel

electrode (column 9, lines 28-37). Akiyama also appears to teach "voltages divided by resistors" and a "voltage dividing circuit" (column 19, lines 41-51). However, Akiyama does not teach or suggest that a dividing circuit divides a signal into n signals and the n signals are inputted into corresponding n pixels by a timing signal supplied from a data driver circuit, simultaneously.

The Official Action asserts that the recitation "wherein the dividing circuit divides a signal into n signals, and wherein the n signals are inputted into corresponding n pixels by a timing signal supplied from the data driver circuit, simultaneously" is merely a functional recitation (page 5, Paper No. 20050711). Then, the Official Action fails to further treat these features on the merits. That is, in ascertaining the scope of the claim, the Official Action ignores a basic precept set forth in the MPEP, that is, "A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used" (MPEP § 2173.05(g)).

The Applicants respectfully submit that the recitation "wherein the dividing circuit divides a signal into n signals, and wherein the n signals are inputted into corresponding n pixels by a timing signal supplied from the data driver circuit, simultaneously," when properly evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used, is not anticipated or rendered obvious by the teachings in Akiyama.

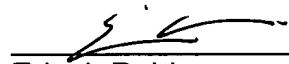
Since Akiyama does not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects dependent claims 10-29 as obvious based on the combination of Akiyama and U.S. Patent No. 6,115,097 to Yamazaki. Please incorporate the arguments above with respect to the deficiencies in Akiyama. Yamazaki does not cure the deficiencies in Akiyama. The Official Action relies on Yamazaki to

allegedly teach the features of the dependent claims. Specifically, the Official Action relies on Yamazaki to allegedly teach a "data line driver circuit comprising a shift register, NAND circuits, a level shifter and a buffer; the substrate comprising glass; and the thin film transistor comprising polycrystalline silicon film" (page 8, Paper No. 20050711. However, Akiyama and Yamazaki, either alone or in combination, do not teach or suggest that a dividing circuit divides a signal into n signals, and that the n signals are inputted into corresponding n pixels by a timing signal supplied from the data driver circuit, simultaneously. Since Akiyama and Yamazaki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,


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